

In the Claims

The following listing of the claims replaces all previous listings.

1. (Currently Amended) A method of tracking data through a multi-tier computing architecture, the method comprising:
 - receiving a request from a client computing system for data from a database;
 - initializing a first row pointer of a dataset with data from a database requested by the client computing system in response to the request by the client computing system;
 - sending the initialized dataset to the client computing system;
 - placing changes to the data by the client computing system in a second row pointer of the dataset;
 - receiving the dataset with the changes;
 - comparing the first and second row pointers; and
 - declaring a state of the data in response to comparing the first and second row pointers.
- 2.-6. (Canceled)
7. (Original) A method according to claim 1, wherein:
 - comparing includes detecting whether the first row pointer is null, and if the first row pointer is null, declaring the data to be new data in response to detecting the first row pointer to be null.
8. (Original) A method according to claim 1, wherein:
 - comparing includes detecting whether the second row pointer is null, and if the second row pointer is null, declaring the data to be deleted data in response to detecting the second row pointer to be null.
9. (Original) A method according to claim 1, wherein:
 - comparing includes detecting whether the first and second row pointers are equal, and if the first and second row pointers are equal, declaring the data to be original data in response to detecting the first and second row pointer to be equal.

10. (Original) A method according to claim 1, wherein:
comparing includes detecting whether the first and second row pointers are equal, and if the first and second row pointers are not equal, declaring the data to be updated data in response to detecting the first and second row pointers to not be equal.
11. (Original) A method according to claim 1, further comprising:
committing the data in the second row pointer.
12. (Original) A method according to claim 11, wherein:
committing includes accepting, rejecting, or merging the data.
13. (Original) A method according to claim 12, wherein:
merging includes merging a plurality of datasets from a plurality of client computing systems.
14. (Original) A method according to claim 13, wherein:
merging includes matching locally unique identifiers between rows of the plurality of datasets.
15. (Original) A method according to claim 11, wherein:
committing includes updating the database with the data in the second row pointer.
16. (Currently Amended) A computer program product readable by a computing system and encoding instructions for a computer process for tracking data through a multi-tier computing architecture, the computer process comprising:
receiving a request from a client computing system for data from a database;
initializing a first row pointer of a dataset with data from a database requested by the client computing system in response to the request by the client computing system;
sending the initialized dataset to the client computing system;

placing changes to the data by the client computing system in a second row pointer of the dataset;

receiving the dataset with the changes;

comparing the first and second row pointers; and

declaring a state of the data in response to comparing the first and second row pointers.

17-21. (Canceled)

22. (Original) A computer program product according to claim 16, wherein:

comparing includes detecting whether the first row pointer is null, and if the first row pointer is null, declaring the data to be new data in response to detecting the first row pointer to be null.

23. (Original) A computer program product according to claim 16, wherein:

comparing includes detecting whether the second row pointer is null, and if the second row pointer is null, declaring the data to be deleted data in response to detecting the second row pointer to be null.

24. (Original) A computer program product according to claim 16, wherein:

comparing includes detecting whether the first and second row pointers are equal, and if the first and second row pointers are equal, declaring the data to be original data in response to detecting the first and second row pointers to be equal.

25. (Original) A computer program product according to claim 16, wherein:

comparing includes detecting whether the first and second row pointers are equal, and if the first and second row pointers are not equal, declaring the data to be updated data in response to detecting the first and second row pointers to not be equal.

26. (Original) A computer program product according to claim 16, further comprising:

committing the data in the second row pointer.

27. (Original) A computer program product according to claim 26, wherein:
committing includes accepting, rejecting, or merging the data.
28. (Original) A computer program product according to claim 27, wherein:
merging includes merging a plurality of datasets from a plurality of client computing systems.
29. (Original) A computer program product according to claim 28, wherein:
merging includes matching locally unique identifiers between rows of the plurality of datasets.
30. (Original) A computer program product according to claim 26, wherein:
committing includes updating the database with the data in the second row pointer.
31. A system for tracking data through a multi-tier architecture, the system comprising:
a receive module that receives a request from a client computing system for data from a database;
an initialize module that initializes a first row pointer of a dataset with data from a database requested by the client computing system in response to the request by the client computing system;
a send module that sends the initialized dataset to the client computing system;
a change module that places changes to the data by the client computing system in a second row pointer of the dataset;
a compare module that receives the dataset with the changes and compares the first and second row pointers; and
a declare module that declares a state of the data in response to comparing the first and second row pointers.
- 32.-34. (Canceled)
35. (Original) A system according to claim 31, further comprising:

a first null module that detects whether the first row pointer is null; and
a new module that declares the data to be new data in response to detecting the first row pointer to be null.

36. (Original) A system according to claim 31, further comprising:
a second null module that detects whether the second row pointer is null; and
a delete module that declares the data to be deleted data in response to detecting the second row pointer to be null.
37. (Original) A system according to claim 31, further comprising:
an equal module that detects whether the first and second row pointers are equal;
an original module that declares the data to be original data in response to detecting the first and second row pointers to be equal; and
an updated module that declares the data to be updated data in response to detecting the first and second row pointers to not be equal.
38. (Original) A system according to claim 31, further comprising:
a commit module that commits the data in the second row pointer.
39. (Original) A system according to claim 38, wherein:
the commit module includes an accept module, a reject module, and a merge module.
40. (Original) A system according to claim 39, wherein:
the merge module merges a plurality of datasets from a plurality of client computing systems.
41. (Original) A system according to claim 40, wherein:
the merge module matches locally unique identifiers between rows of the plurality of datasets.
42. (Original) A system according to claim 38, wherein:

the commit module updates the database with the data in the second row pointer.